

Chapter 1

Overview

The joint tactical ground station (JTAGS) is the transportable, mobile, in-theater element of US Space Command's (USSPACECOM) theater event system (TES). The JTAGS provides theater commanders a continuous 24-hour capability to receive and process direct downlinked data from space-based Defense Support Program (DSP) sensors. The JTAGS uses the downlinked data to disseminate early warning, alerting, and cueing information on tactical ballistic missiles (TBMs) and other infrared events of interest throughout the theater.

PURPOSE OF THE MANUAL

1-1. JTAGS represents a major Army contribution to theater missile defense (TMD) and is the subject of this manual. TMD refers to the identification, integration, and employment of forces, supported by theater and national capabilities, utilized to detect, identify, locate, track, minimize the effects of, and destroy enemy theater missiles. TMD is a coordinated joint service effort. The key to JTAGS theater support is its relatively direct connectivity and distribution architecture via a variety of voice reporting and data warning networks. A JTAGS section field emplacement is pictured in Figure 1-1.



Figure 1-1. JTAGS Field Emplacement

1-2. Event data is received directly from DSP satellites and covers the theater area of responsibility (AOR). The data is processed in theater and disseminated to both theater and worldwide users by both data and voice. By its in-theater location, JTAGS reduces the possibility of single-point failure in long-haul communication architectures. See Section IV of Chapter 3 for a detailed description of JTAGS' major systems.

1-3. This manual details how JTAGS is used to provide the geographic combatant commander in chief (CINC) or the joint task force commander with an in-theater capability that exploits DSP-supplied data to provide early warning, alerting, and cueing in near real time to counter and defeat the threat of TBMs. It provides doctrinal guidance to Army commanders at all levels: strategic, operational, and tactical. The manual's intended audience consists of joint theater planners, their service counterparts at combatant commands and subordinate elements who construct the CINC's theater operation plans (OPLANs), and the JTAGS detachment leader who is responsible for the mission accomplishment of the JTAGS section.

HISTORICAL PERSPECTIVE

1-4. During the Gulf War, the allied coalition committed tremendous resources to counter the Iraqi TBM threat. Strategic planners have assumed that other countries will continue to acquire and employ TBMs to threaten US or allied assets during future force projection operations. As the number of friendly force projection operations increases, TBMs will continue to pose a threat to troop concentrations and geopolitical assets. TMD will remain a priority to the joint task force commander until the TBM threat is completely nullified.

1-5. TBMs were used as weapons of terror against both military and geopolitical targets during the Gulf War and earlier in Iran and Iraq during the "War of the Cities." Now more than 25 countries have TBM capabilities and that number is expected to increase. Generally, TBM ranges are from 80 to 3,500 kilometers (km), and flight times vary from several minutes to tens of minutes.

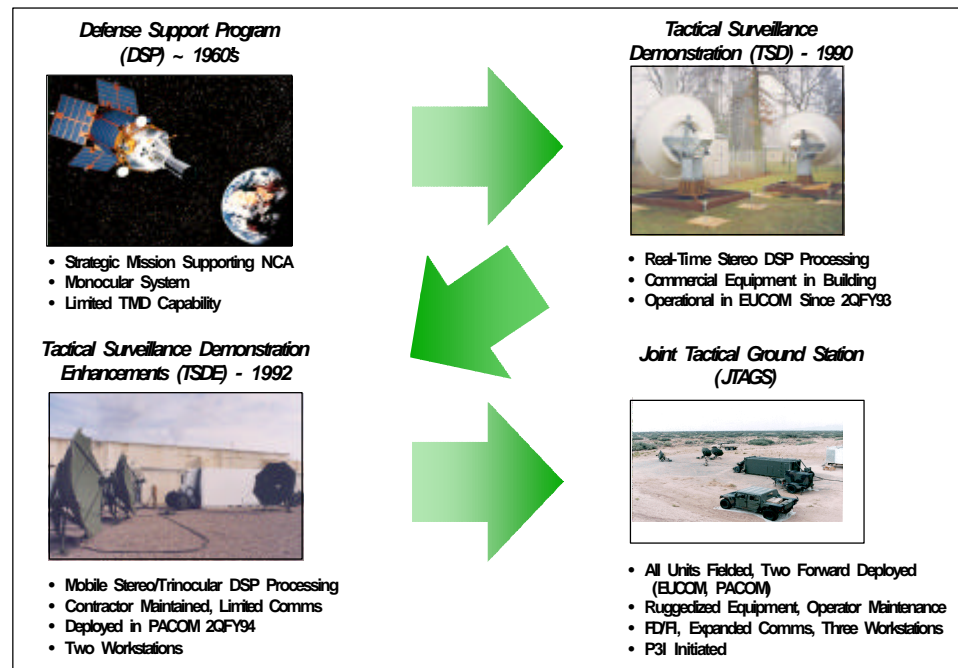
1-6. The use of TBMs since World War II is listed in Table 1-1. Many countries continue to procure low cost TBMs, forcing military planners and strategists to consider their potential use when evaluating a potential foe's warfighting capabilities.

1-7. JTAGS meets the needs of the combatant CINC or joint task force commander for a reliable and responsive tactical capability to receive, process, and distribute information on TBMs for TMD active defense, passive defense, and attack operation purposes. The Gulf War demonstrated the need for accurate and timely reporting of TBMs launched within or into the theater. Near real-time information on TBM attacks is needed to efficiently and effectively employ TMD forces and to provide warning to threatened military forces and geopolitical centers.

Table 1-1. Ballistic Missile Use Since World War II

YEAR	EVENT	MISSILE
1944-1945	German attacks on Allies	V2
1973	Egyptian and Syrian attacks on Israel	Scud
1980-1988	Iran - Iraq War	Scud
1986	Libyan attacks on US Coast Guard base at Lampedusa, Italy	Scud
1989-1991	Afghan government use on Mujahideen	Scud
1991	Iraqi attacks during Persian Gulf War on Israel, Saudi Arabia, Bahrain	Scud
1994	Yemeni Civil War	Scud

1-8. Operation Desert Shield/Storm (ODS) highlighted the urgent need to separate TMD tactical operations from strategic warning system ground sites. For a significant portion of ODS, tactical support to theater forces by strategic space and ground-based systems was a secondary mission to strategic support. The tactical event reporting system (TERS) that supported the US missile defense capabilities during ODS provided warning information only, was subject to single-point failure, and placed a burden on long-haul communication systems. TMD systems used prior to JTAGS are shown in Figure 1-2.

**Figure 1-2. JTAGS Evolutionary History**

1-9. A secondary voice reporting system, originating from the Missile Warning Center in Colorado Springs, CO, to the combatant CINC functions in the United States European Command, United States Pacific Command, United States Forces Korea, and United States Central Command (USCENTCOM). This voice reporting system was first used through the CINC CENTCOM execution network (an ultra-high frequency (UHF) satellite

communication (SATCOM) network) initiated during ODS. This voice reporting system is subject to weaknesses similar to those that were inherent to the TERS. Warfighting CINCs needed a dedicated, in-theater capability to collect and report TBM data with such accuracy and timeliness that the information could be used in real time to alert and cue theater missile defense forces and also expedite attack of the TBMs and their support infrastructure on the ground. JTACS was created as the response to meeting those needs.

MISSION

1-10. Each combatant CINC will establish procedures by which allied and coalition forces will receive TBM attack warning and alerting messages. JTACS accesses and interfaces with theater communication networks to transmit early warning, alerting, and, where possible, cueing reports on launched hostile ballistic missiles. JTACS performs near real-time tactical event reporting by using specialized processing of data obtained from the DSP constellation. JTACS also has the capability to support operations from adjacent theaters, given appropriate communication links. Figure 1-3 depicts a notional JTACS deployed in an operational environment.

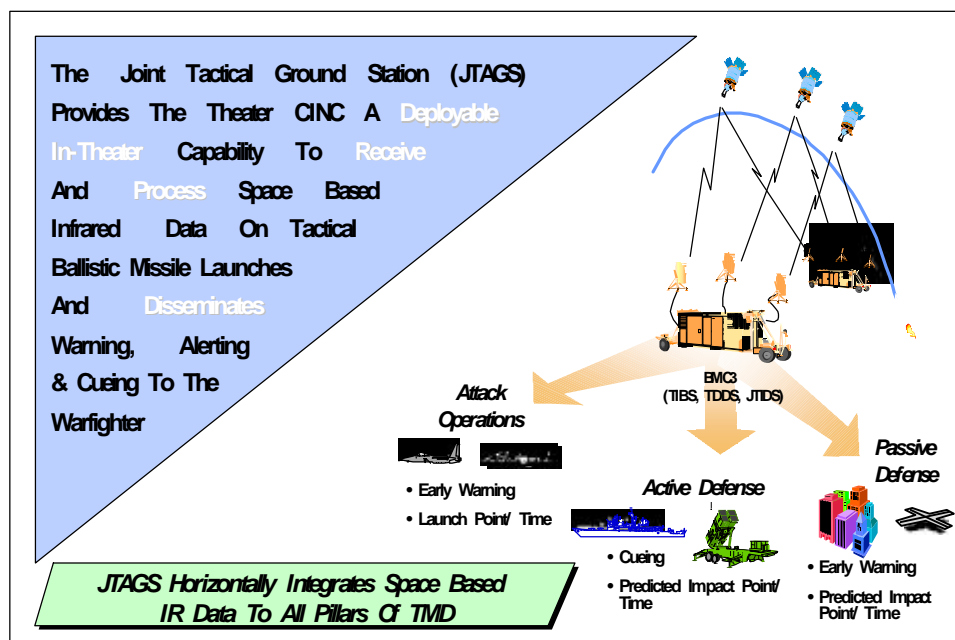


Figure 1-3. JTACS Mission

1-11. JTACS reports information to support the functional components of TMD: attack operations, active defense, passive defense, and the battle management/command, control, communications, computers, and intelligence (BM/C4I) structure that undergirds and facilitates the performance of each.

1-12. JTACS reports estimated launch point coordinates, predicted ground impact point coordinates, and state vectors. Additionally, JTACS produces and distributes reports concerning selected static infrared (IR) events.

THEATER EVENT SYSTEM

1-13. TES is USSPACECOM's missile detection and warning architecture that provides reliable, comprehensive tactical warning support (assured warning) to theater elements. USSPACECOM coordinates tactical warning via a system of systems with similar tactical support missions: JTAGS (Army and Navy), attack and launch early reporting to theater (ALERT) (Air Force), and tactical detection and reporting (TACDAR). These programs comprise the TES and mutually support each other in the mission of tactical missile and other event reporting to theater.

1-14. USSPACECOM executes the missile-warning mission through the joint strategic capabilities plan (JSCP) and is the owner/operator of the DSP satellite constellation. USSPACECOM and the North American Aerospace Defense Command (NORAD) jointly operate the Missile Warning Center-Tactical (MWC-T) as part of the Cheyenne Mountain Operations Center (CMOC) that provides day-to-day coordination of TES operations. Because JTAGS is under the combatant command (COCOM) of Commander in Chief, United States Space Command (USCINCSpace), major taskings, such as deployment or exercise participation, are required to be coordinated through the USSPACECOM Director of Operations (J3). The components of the TES are presented in Figure 1-4.

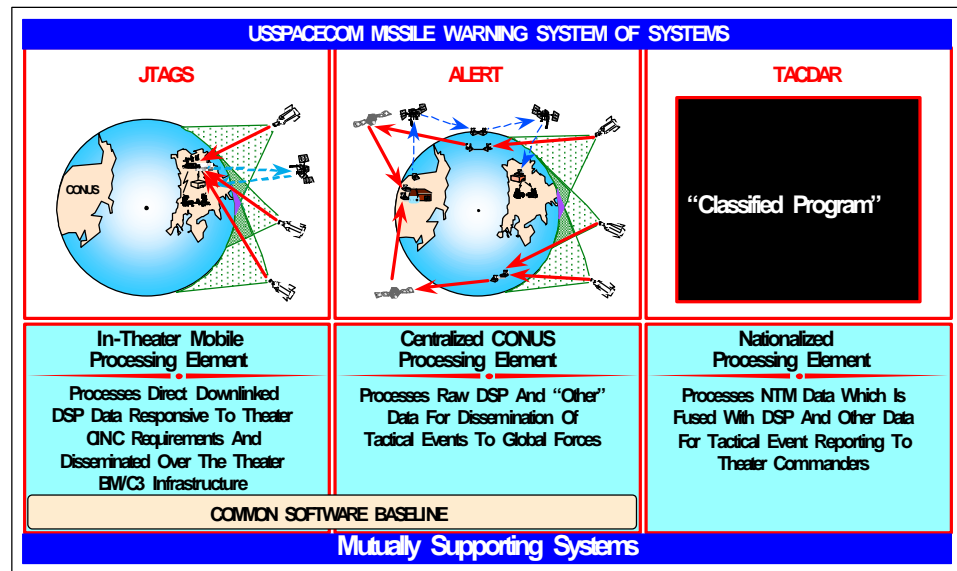


Figure 1-4. In-Theater TES

1-15. United States Army Space Command (USARSPACE) and Naval Space Command (NAVSPACECOM), both component commands of USSPACECOM, are responsible for training, manning, operating, and equipping JTAGS systems. USARSPACE is the component lead and is responsible for day-to-day operation, control, and support (OPCON) of JTAGS. Inter-service support agreements are coordinated by USARSPACE to support equipment and personnel of the forward-deployed JTAGS units.

LAYOUT OF THE MANUAL

1-16. Chapter 1 examines how the Gulf War validated the requirement for accurate and timely reporting of TBMs launched into a theater. Near real-time information on TBM attacks is needed to efficiently and effectively employ theater missile defenses. JTACS provides this information.

1-17. Chapter 2 discusses command relationships during varying theater scenarios: peacetime and special wartime.

1-18. Chapter 3 examines JTACS support of the operational elements of theater missile defense, JTACS force structure, responsibilities of key section personnel, major equipment subsystems, system capabilities and limitations, JTACS modes of operation, strategic and tactical deployment considerations, communication systems employed by JTACS, the information distribution concept, and connectivity requirements.

1-19. Chapter 4 discusses planning considerations of which theater planners and logisticians must be knowledgeable, combat service support responsibilities, the unique maintenance procedures for JTACS, transportation capabilities, support services required for personnel, reconstitution actions to restore damaged equipment, physical security requirements, and facility requirements.

1-20. The appendixes provide detailed information and guidance for the soldiers and sailors who are responsible for accomplishing the JTACS mission.